A STUDY TO ASSESS THE EFFECTIVENESS OF ISOMETRIC EXERCISE ON LEVEL OF KNEE PAIN AND QUALITY OF LIFE AMONG ELDERLY IN INTERVENTION GROUP AND CONTROL GROUP.

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DOI: http://doi.org/10.47211/trr.2022.v08i01.017

ABSTRACT

Aging is a process in which an individual's functional capacity deteriorates as a result of structural changes. As people get older, the proportion of people aged 60 and up grows faster than any other agegroup. In the old age, there is an increased risk of morbidity leading to limitation of movements due topain and discomfort. A Quasi-experimental pre-test and post-test control group research design was selected for this study. A total of 200 elderly were selected by using a convenient sampling technique in both experimental and control groups. Individual consent both verbal and written was obtained from the elderly. The mean score of Effectiveness of isometric exercise on the level of knee pain among elderly in intervention group in the pre-test was 36.03±5.62 and the mean score in the post- test 1 was 29.41±5.205. The calculated paired't' test value of t =12.34 shows statistically highly significant difference. The mean score of Effectiveness of isometric exercise on the level of knee pain amongelderly in intervention group in the pre-test was 36.06±5.624 and the mean score in the post-test 2 was 22.01±3.03. The calculated paired't' test value of t = 22.57 shows statistically highly significant difference in intervention group. The mean score of in Control group in the pre-test was 36.10±4.56 and the mean score in the post- test 1 was 36.05±5.79. The mean score of in Control group in the pre-test was 36.10±4.56 and the mean score in the post- test 2 was 36.02±7.99. The calculated paired't' test value of t =0.148 shows statistically non-significant difference. The mean score in intervention group in the pre-test was 44.30±4.37 and the mean score in the post- test 1 was 69.61±11.01. The calculated paired't' test value of t =-36.31 shows statistically highly significant difference in intervention group. The mean score on the level of quality of life among elderly in intervention group in the pre-test was44.30±4.37 and the mean score in the post- test 2 was 76.93±12.94. The calculated paired't' test value of t =-36.33 shows statistically highly significant difference in intervention group. The mean score in the Control group in the pre-test was 25.26±2.22 and the mean score in the post-test 1 was 27.76±12.35. The calculated paired't' test value of t =-1.91 shows the statistically non-significant difference in Control group. The mean score in Control group in the pre-test was 25.26±2.22 and the mean score in the post- test 2 was 50.81±5.74. The calculated paired 't' test value of t =-69.58 shows statistically significant difference in Control group.

Key Words : *Knee pain, isomeric exercise, Deteriorates.*

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INTRODUCTION

Aging is a biological process, not a disease or curse which is inevitable and irreversible. It is associatedwith many of physiological and biological changes which are progressive. As such there is no standardnumerical criterion to define 'old age'. However United Nations recommended a cut off of age 60 years and above when referring to elderly population. (D. J. Patil and M. M. Shindhe, 2018)

Ageing is a natural and unavoidable process in human life. With the advancement of medical science, health care delivery system and various other factors - life expectancy of the people is increasing gradually. (Ayon Ghosh et al., 2017)

The population of people aged 60 years and above is increasing rapidly in the world. This phenomenon is attributed to longer life expectancy, low fertility rates, remarkable public health policies, and advances in medicine and health care. (Obinna Francis Onunkwor et al., 2016)

Ageing is a process in which an individual's functional capacity deteriorates as a result of structural changes. As people get older, the proportion of people aged 60 and up grows faster than any other agegroup. In the old age, there is increased risk of morbidity leading to limitation of movements due to pain and discomfort. (Lokare P. O et al., 2015)

TITLE

A study to assess the effectiveness of isometric exercise on level of knee pain and quality of life among elderly in intervention group and control group.

OBJECTIVE

1. Effectiveness of isometric exercise on the level of knee pain among elderly in intervention group and control group
2. Effectiveness of isometric exercise on the level of quality of life among elderly inintervention group and control group.

REVIEW OF LITERATURE

Elisabeth Ginnerup-Nielsen et al., (2021) conducted a cross-sectional study to estimate the prevalence of knee pain and the association between disease perception profiles and self-management strategies in the Frederiksberg cohort of older individuals with knee pain. A total of 4292 elderly were selected using a convenient no-probability sampling technique. Data were collected through a short disease perception questionnaire. The results showed that the prevalence of knee pain was 21.4%, of which 40.5% reported not using self-management strategies (non-users). The study concluded that poorer disease perception was associated with higher levels of knee symptoms, lower quality of life, and a tendency to use more treatments for knee pain.

Sumaiyah Mat, Shahrul Bahyah Kamaruzzaman, Ai-Vyrn Chin, and Maw Pin Tan (2020) reviewed a prospective study of the effects of knee pain on fear of falling, changes in instrumental activities of daily living, and falls in Malaysians aged 55 and older. A total of 605 participants were selected using multi-stage random sampling. Data were collected through instrumental activities of daily living. The results showed that knee pain was present in 30.2%. The study concluded that it assessed the potential protective effect of knee pain, which could be due to increased alertness and activity avoidance for fear of falling.

METHODOLOGY

A Quasi-experimental pre-test and post-test control group research design was selected for this study. A total of 200 elderly were selected by using a convenient sampling technique in both experimental and control groups. Individual consent both verbal and written was obtained from the elderly.

RESULTS

The mean score of Effectiveness of isometric exercise on the level of knee pain among elderly in intervention group in the pre-test was 36.03$\pm$5.62 and the mean score in the post- test 1 was 29.41$\pm$5.205. The calculated paired't' test value of t =12.34 shows statistically highly significant difference. The mean score of Effectiveness of isometric exercise on the level of knee pain among elderly in intervention group in the pre-test was 36.06$\pm$5.624 and the mean score in the post- test 2 was 22.01$\pm$3.03. The calculated paired't' test value of t = 22.57 shows statistically highly significant difference in intervention group. The mean score of in Control group in the pre-test was 36.10$\pm$4.56 and the mean score in the post- test 1 was 36.05$\pm$5.79. The mean score of in Control group in the pre-test was 36.10$\pm$4.56 and the mean score in the post- test 2 was 36.02$\pm$7.99. The calculated paired't' test value of t =0.148 shows statistically non-significant difference. The mean score in intervention group in the pre-test was 44.30$\pm$4.37 and the mean score in the post- test 1 was 69.61$\pm$11.01. The calculated paired't' test value of t =-36.31 shows statistically highly significant difference in intervention group. The mean score on the level of quality of life among elderly in intervention group in the pre-test was 44.30$\pm$4.37 and the mean score in the post- test 2 was 76.93$\pm$12.94. The calculated paired't' test value of t =-36.33 shows statistically highly significant difference in intervention group. The mean score in the

Control group in the pre-test was 25.26±2.22 and the mean score in the post-test 1 was 27.76±12.35. The calculated paired't' test value of t =-1.91 shows the statistically non-significant difference in Control group. The mean score in Control group in the pre-test was 25.26±2.22 and the mean score in the post- test 2 was 50.81±5.74. The calculated paired 't' test value of t =-69.58 shows statistically significant difference in Control group.

Figure :1 Effectiveness of isometric exercise on the level of knee pain among elderly inintervention group and control group.

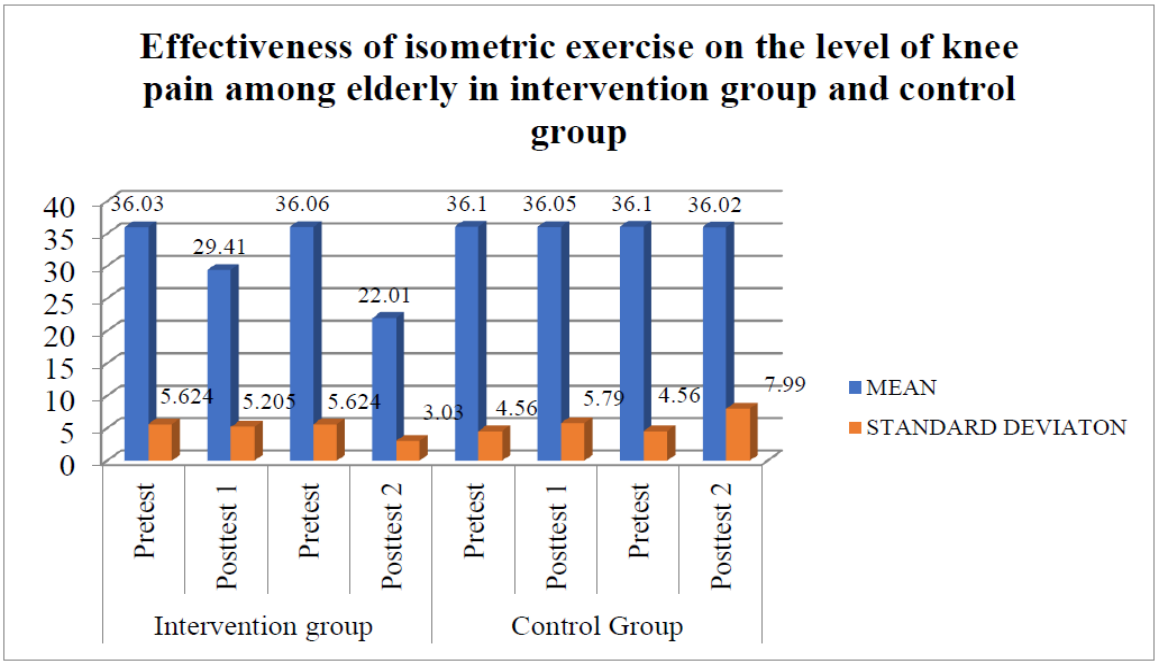
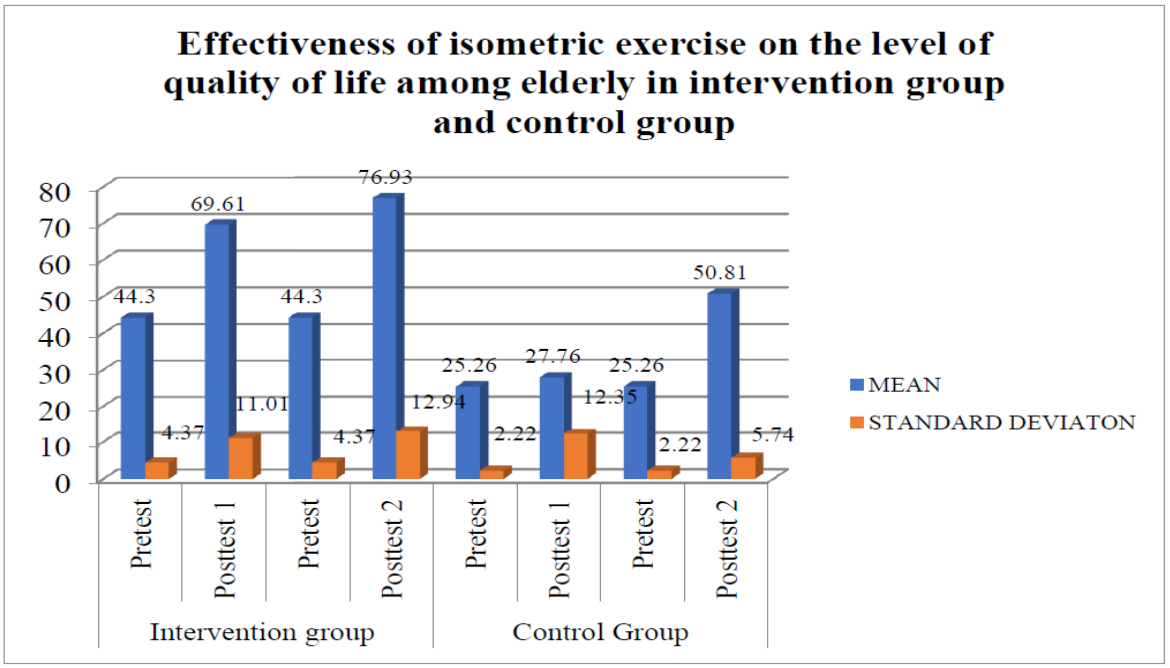


Figure .2 Effectiveness of isometric exercise on the level of quality of life among elderly inintervention group and control group.



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